Structural Changes in Surface Layers of Technically-pure Iron (cont.)

given of the structure of this zone and the $H_{\rm V}$ of its surface layers with different E. The following phases in the hardened layer were discovered by X-ray diffraction analysis: Fe a, Fe4N, and austenite with an Fe E; cementite, Fe nitrides, austenite, and martensite with a graphite E: carbides of W and Ti, Fe nitrides, austenite, and martensite with a T15K6 E. Decomposition of nitrides and carbides with subsequent decrease of $H_{\rm V}$ was observed after tempering from 100 to 650°C and annealing at 750 and 850°. The formation of a hardened layer in electric-spark elements of the surrounding medium (air: 72% N₂ and -28% O₂), as well as on the E material.

I.B.

Card 2/2

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513820018-3

S/123/59/000/006/013/025 A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 6, p. 120, # 20956

AUTHOR:

Fufayev, L. S.

ΝX

TITLE:

The Influence of a Single Spark Discharge on the Structure of the

Surface Layers of Carbon Steels

PERIODICAL:

Tr. kafedry "Tekhnol, metallov". Mosk, stankoinstrum, in-t, 1957,

No. 1, pp. 39-44

TEXT: Marks of single spark discharges were obtained on specimens of tempered steels 45% y8 (U8)% y12 (U12)% and hardened y8 (U8) from electrodes of commercial Fe, graphite, and the hard alloy T15K6 (T15K6)% at the voltage of 220 v, the capacitance of 200 microfarad, and the short-circuit current of 3 amp. A craterlike hole of 0.3-0.4-mm diameter emerges on the specimen surface at the point of spark discharge passing. The hole edges of tempered steel are surrounded by two concentric zones with an altered structure. The first zone is the zone of smelting and full hardening with martensite structure without excess phases, and the second zone is that with martensite structure and with a lattice of ferrite

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3/123/59/000/006/013/025 A005/A001

The Influence of a Single Spark Discharge on the Structure of the Surface Layers of Carbon Steels

(steel 45) or cementite (U12). The microhardness of the martensite sections of the second zone amounts to 890-1,070 kg/mm2. The hole on the hardened steel has, moreover, an external zone of tempering with a hardness of 710-840 kg/mm². The first zone at the graphite anode contains a considerable amount of residual austenite in connection with the saturation of the metal by carbon as well as by nitrogen from the air. At the hard alloy anode, sections of the hard alloy are discovered with the microhardness of 2,575-2,853 kg/mm2 which are located near the hole edges. The nature of hardness changes at tempering the martensite sections around the holes obtained at the hard alloy anode, points out the saturation of the metal by tungsten and cobalt from the anode. The following picture of the action of spark discharges on the metal is suggested: During a short time after the formation of the spark discharge, a "microbath" of liquid metal exists on the specimen surface; the initial composition of the liquid does not differ from that of the specimen. This bath at the iron anode is saturated additionally by nitrogen from the air; at the graphite anode by carbon and nitrogen; at the hard alloy anode by the elements constituting the alloy composition. The heat

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S/123/59/000/006/013/025 A005/A001

The Influence of a Single Spark Discharge on the Structure of the Surface Layers of Carbon Steels

elimination into the specimen bulk makes the cooling rate exceeding the critical rate, and the solidified metal of the first zone, as well as the metal of the second zone adjacent to the first one, is hardened. There are 8 figures.

S, A. G.

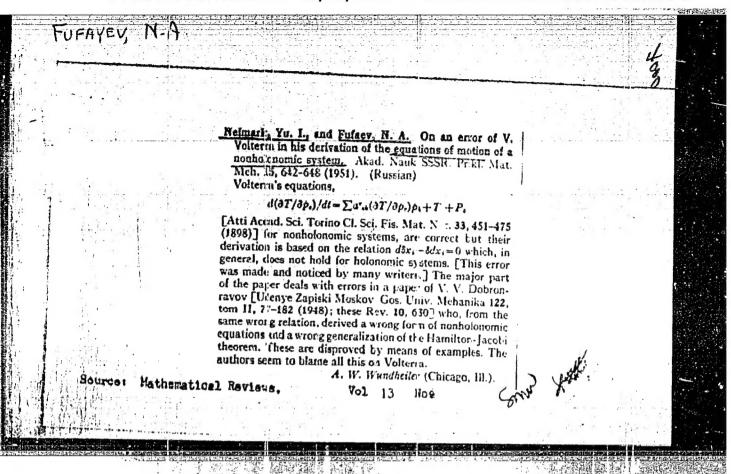
Translator's note: This is the full translation of the original Russian abstract.

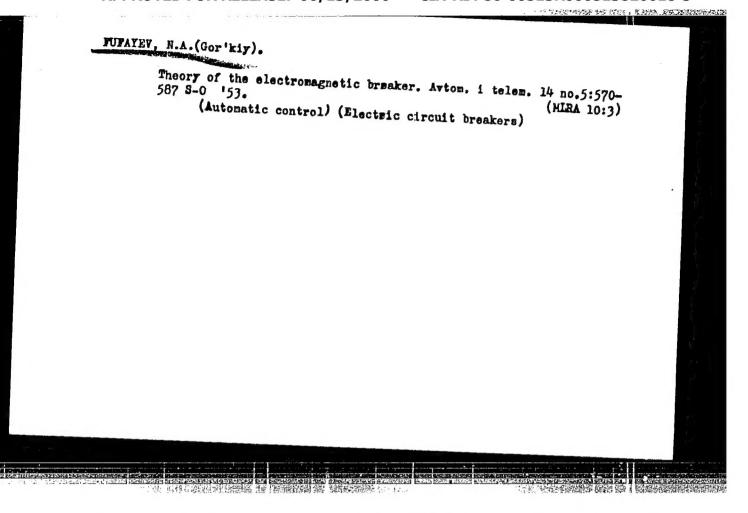
Card 3/3

PODGURSKIY, G.V., kand.tekhn.nauk; FUFAYEVA, M.A., inzh.

Machanizing the machining of turning parts of sectors for manufacturing rolled drills. Nov.tekh.izg.instr. no.2:77-87

161. (Motal cutting)





	 Construction foliable 1 Problem to State Business States
USSR/Mathematics - Nonholonomic "Comments on V. V. Dobronravov's Article 'Certain Th. I. Neymark and N. A. Fufayev (critics) Frik Mat i Meh, Vol 17, No 2, F 260 State that a remark in V. V. Dobronravov's (Prik a criticism of certain of his works. The criticism titled "An Error by Volterra Admitted by him in titled "An Error by Volterra Admitted by him in this Derivation of the Equations of Motion of Monormal Systems" (ibid. Vol 15, No 5, 1951). 250T24 his Derivation of the Equations of Motion of Mon-Point out errors in Dobronravov's articles.	PA 250T2L

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88751 165600 s/040/60/024/006/005/024 AUTHORS: Neymark, Yu. J., Fufayev, N. A. C 111/ C 333 TITLE: Permutable Relations in Analytical Mechanics of Nonholonomeous (Cor'kiy) PERIODICAL: Prikladnaya matematika i mekhanika, 1960, Vol. 24, No. 6, TEXT: The authors investigate the question how far it is justified to assume the correctness of the relation d of q - fdq - 0, where d is the differentiation with respect to the time and of the virtual variation, not only for holonomeous but also for nonholonomeous systems. It is admissible according to Hamel and Volterra, it is not admissible according to Levi-Civita, Amaldi and others. The authors show that the discrepancy arises, since the operations do and od occurring in (0.1) are not satisfactorily defined. In the neighborhood of the considered path of motion $q_1 = q_1(t)$ the authors introduce a curvilinear system $q_1 = q_1(u_1, u_2, \dots, u_n)$ so that $u_2 = u_3 = \dots = u_n = 0$ corresponds to the path, where $u_1 = t$

S/040/60/024/006/005/024 C 111/ C 333

Permutable Relations in Analytical Mechanics of Nonholonomeous Systems

is on the path. The planes which touch the surfaces $u_n = 0$ in the points $u_2 = u_3 = \cdots = u_n = 0$ are the planes of virtual displacements of the system. For linear and homogeneous kinematic bindings now it is defined:

(1.1)
$$\frac{dq_{\tau}}{\partial u_{1}} = \frac{\partial q_{\tau}}{\partial u_{1}} du_{1}, \quad \int q_{\tau} = \frac{\partial q_{\tau}}{\partial u_{r}} \qquad \int u_{r} (\tau = 1, ..., m+k;)$$

$$dq_{\tau} = a_{\tau_{8}} dq_{s}, \quad \int q_{\tau} = a_{\tau_{8}} dq_{s} (\tau = m+k+1, ..., n; s=1, ..., m),$$
where m is the number of the second second

where m is the number of the degrees of freedom, k fixed number $(0 \le k \le n-m)$, where it is summed over double indices, and where $r,s,l=1,\ldots,n$, $m;i=1,\ldots,n$; $j=m+1,\ldots,n$; $g=m+1,\ldots,m+k$ $\varnothing,\beta,\lambda,\mu,\nu=1,\ldots,m+k$; $\delta=m+k+1,m+k+2,\ldots,n$. If for a nonholonomeous system with the bindings (1.2) $\dot{q}_j=a_{js}\dot{q}_s$ Card 2/A

S/040/60/024/006/005/024 C 111/ C 333

Permutable Relations in Analytical Mechanics of Nonholonomeous Systems

there are introduced the quasicoordinates $\mathcal{T}_1, \ldots, \mathcal{T}_{m+k}$ by

(1.3) $\pi_r = a_{rs}\dot{q}_s$, $\pi_g = a_{gs}\dot{q}_s - q_g$ then one obtains the relations

(1.4) $d d q_{\lambda} = d d q_{\lambda} = 0$, $d d \pi_{\lambda} - d d \pi_{\lambda} = \lambda_{\lambda \lambda \mu} d \pi_{\mu} d \pi_{\nu} d q_{\sigma} = d q_{\sigma} = d q_{\sigma}$ where

(1.5) $\delta_{\nu\lambda}\mu = b_{\alpha\nu}b_{\beta\mu}\left(\frac{\hat{c}a_{\lambda\alpha}}{\partial q_{\beta}} - \frac{\partial a_{\lambda\beta}}{\partial q_{\alpha}}\right), b_{\alpha\lambda}a_{\lambda\beta} = \delta_{\alpha\beta}\left(\delta_{\alpha\beta} \text{ Kronecker}\right)$ (1.6) $B_{\tau s}^{\epsilon} = \frac{\partial a_{\sigma s}}{\partial q_{\tau}}, \frac{\partial a_{\sigma s}}{\partial q_{\delta}}a_{\delta\tau} - \frac{\partial a_{\sigma\tau}}{\partial q_{\delta}} - \frac{\partial a_{\sigma\tau}}{\partial q_{\delta}}a_{\delta\tau}$ symbol)

The two aspects mentioned above correspond to the cases k = n - m

Now the authors show that the equations of motion of a nonholonomeous system can be written with the aid of (1.4) so that the equations

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Permutable Relations in Analytical Mechanics of Nonholonomeous

in quasicoordinates of Hamel as well as the equations in real coordinates of Chaplygin are obtained as special cases. In the same way the principle of stationary effect can be formulated in a general form also valid for nonholonomeous systems.

The authors mention Suslov, Chaplygin, V. J. Kirgetov and P.

There are 23 references: 11 Soviet, 5 German, 3 Italian, 2 French,

SUBMITTED: March 21, 1960

Card 4/4

1103, 1057, 1111

S/040/61/025/003/001/026 D208/D304

AUTHOR:

Fufayev, N.A. (Gor'kiy)

TITLE:

Chaplygin equations and the transfer multiplier

PERIODICAL: Akademiya nauk SSR. Otdeleniye tekhnicheskikh nauk. Prikladnaya matematika i mekhanika, v. 25, no. 3, 1961, 385 - 390

TEXT: This is a continuation of an earlier work by S.A. Chaplygin (Ref. 1: 0 dvishenii tyazhelogo tela vrashchenya na gorizontal noy ploskosti (On the Motion of a Heavy Solid of Revolution on a Horizontal Plane) sobr. soch. Ti. izd-vo AN SSSR, L., 1933) and the author derives the Chaplygin equations of motion for non-holonomic systems in quasi-coordinates. The system is determined by n generalized coordinates $q_1 \cdots q_n$ and possesses m degrees of freedom (m < n). Quasi-coordinates are defined by

Card 1/4

 $\dot{\pi}_{\alpha} = \mathbf{a}_{\alpha} \beta \, \dot{\mathbf{q}}_{\beta}$ $(\alpha, \beta = 1, \ldots, m)$

(1.1)

Chaplygin equations and the ...

5/040/61/025/003/001/026 D208/D304

where a double subscript denotes summation, quasi-velocities are

 $\dot{q}_i = b_{i\sigma'} \dot{x}_{\sigma'} (i = 1, \ldots, n; \sigma = 1, \ldots, m)$ (1.2)

and resulting Chaplygin's equations are

$$\frac{d}{dt}\frac{\partial L^{\bullet}}{\partial \dot{\pi}_{\alpha}} - \frac{\partial L^{\bullet}}{\partial \pi_{\alpha}} + \frac{\partial L}{\partial \dot{q}_{i}} \left(\frac{\partial b_{i\sigma}}{\partial \pi_{\alpha}} - \frac{\partial b_{i\alpha}}{\partial \pi_{\alpha}} \right) \dot{\pi}_{\sigma} = 0 \qquad \begin{pmatrix} i = 1, 2, 3, \dots, n \\ \alpha, \beta, \sigma = 1, \dots, m \end{pmatrix}$$
(1.7)

where

$$L^*(q_{\beta}, \mathring{\pi}_{\sigma}) = L(q_{\beta}, b_{i\sigma} \mathring{\pi}_{\sigma}). \tag{1.5}$$

The method of integrating Chaplygin's equations is given by introducing new independent variable τ related to time t by

$$d\tau = Ndt \tag{0.1}$$

where N = a determinable function of independent parameters, called by the author the "transfer multiplier". Here the theorem is de-

Card 2/4

Chaplygin equations and the ...

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rived in terms of quasi-coordinates and the function N is found to be such as to satisfy simultaneously

$$\frac{1}{N}\frac{\partial N}{\partial \pi_1} = B_i \left(\frac{\partial b_{i2}}{\partial \pi_1} - \frac{\partial b_{i1}}{\partial \pi_2} \right), \qquad \frac{1}{N}\frac{\partial N}{\partial \pi_2} = -A_i \left(\frac{\partial b_{i2}}{\partial \pi_1} - \frac{\partial b_{i1}}{\partial \pi_2} \right) \tag{2.9}$$

where

$$\frac{\partial b_{i\alpha}}{\partial \pi_{\beta}} = \frac{\partial b_{i\alpha}}{\partial q_{\sigma}} \frac{\partial q_{\sigma}}{\partial \pi_{\beta}} = \frac{\partial b_{i\alpha}}{\partial q_{\sigma}} b_{\sigma\beta} \qquad \begin{pmatrix} i = 1, \dots, n \\ \alpha, \beta, \sigma = 1, 2 \end{pmatrix}$$

 A_{1} , B_{1} are known functions of q_{1} and q_{2} and given by

$$\frac{\partial L}{\partial \mathbf{q_i}} = \frac{1}{N} \left(\mathbf{A_i} \ \mathbf{p_1} + \mathbf{A_i} \ \mathbf{p_2} \right) \tag{2.8}$$

where

$$p_1 = \frac{\partial T^{\circ}}{\partial \pi_1'} = N^2 (L_1 \pi_1' + M \pi_2'), \qquad p_2 = \frac{\partial T^{\circ}}{\partial \pi_2'} = N^2 (M \pi_1' + L_2 \pi_2')$$
(2.7)

and M is given by

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Chaplygin equations and the ...

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 $2T^{\bullet} = L_1 \dot{\pi}_1^2 + 2M \dot{\pi}_1 \dot{\pi}_2 + L_2 \dot{\pi}_2 = N^2 (L_1 \pi_1'^2 + 2M \pi_1' \pi_2' + L_2 \pi_2'^2) = 2T^{\circ}$

and

$$\dot{q}_i = b_{i1} \dot{n}_1 + b_{i2} \dot{n}_2 \quad (i = 1, ..., n).$$
 (2.1)

Next, the type of problems is considered for which quasi-coordinates can be introduced and it is shown that the problems have to satisfy the following conditions: 1) Number 1 of real coordinates on which coefficients of non-holonomic relations and Lagrangian function depend must be smaller than m = degrees of freedom of the system. 2) Number k of quasi-coordinates which together with 1 real coordinates are chosen as free parameters cannot be greater than m - 1. An example quoted by Chaplygin is solved by means of quasi-coordinates. There are 7 Soviet-bloc references.

SUBMITTED: December 2, 1960

Card 4/4

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513820018-3

NEYMARK, Yu.I.; FUFAYEV, N.A. (Gor'ky)

"Dynamics of non-holonomic systems"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

"APPROVED FOR RELEASE: 06/13/2000 CI

CIA-RDP86-00513R000513820018-3

FUFAYEV, N. A. (Gor'ky)

"On the idealisation of surface contact by means of point contact".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964.

ACCESSION NR: APLO13380

s/0040/64/028/001/0051/0059

AUTHORS: Neymark, Yu. I. (Gor'kiy); Fufayev, N. A. (Gor'kiy)

TITLE: Equations of motion for systems with nonlinear nonholonomic relations

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 1, 1964, 51-59

TOPIC TAGS: equation of motion, nonlinear nonholonomic relation, analytic mechanics, virtual perturbation, Appell-Gamel example

ABSTRACT: The authors prove that the equations of motion of a system with a nonlinear nonholonomic relation, obtained by Gamel, do not describe its behavior if one considers that it is a limiting case of a nonholonomic system with linear relations. Apropos the possibility of realizing nonlinear nonholonomic relations, various works on this subject do not actually contain examples of systems with nonlinear ideal nonholonomic relations which are essentially different from the example of P. Appell given by him in 1911. This example was carefully studied by Gamel, who set up equations of motion for it, starting from the conventional definition of virtual perturbations for systems with nonlinear nonholonomic

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CIA-RDP86-00513R000513820018-3

ACCESSION NR: AP4013380

relations. The authors show that a more correct approach to the study of the system in the Appell-Gamel example leads to motions which are not described by the equations obtained by Gamel. Orig. art. has: 6 figures and 23 formulas.

ASSOCIATION: none

SUBMITTED: 08Jul63

DATE ACQ: 26Feb64

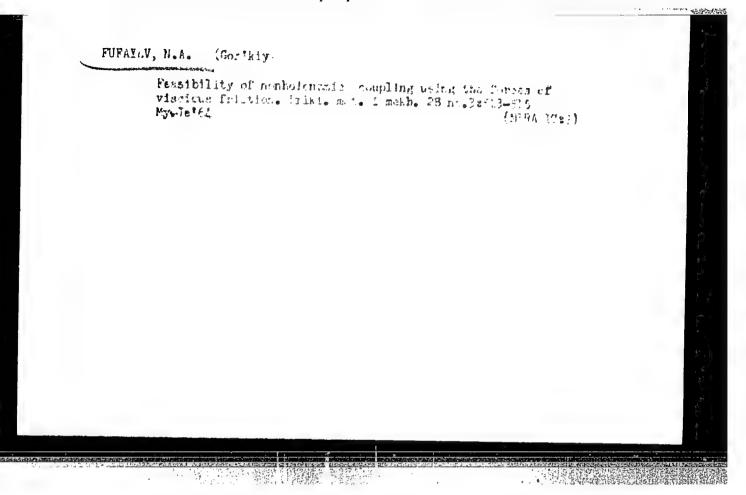
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NO REF SOV: 001

OTHER: 005

Card 2/2



FOR GRAYON, V.M., PELPUNN, Ye.S. [daceased]; MINTS, R.P., FEFAYEV, M.A.

By order of an obsiliator or rotor system. Tav. vys. wchet.

22v., radiofic. 8 no.2:559-371 *65. (MIRA 18:6)

1. Non hno desiedovatel sky fiziko-takhnicheskiy institut pri

Go: 'kovskop universitator.'

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513820018-3"

L 54607-65 ENT(d)/ENT(m)/ENP(w) IJP(c) EM S/0040/65/029/001/0046/0053

AUTHOR: Neymark, Yu. I. (Gor'kiy); Fufayev, M. A. (Gor'kiy)

10

TITLE: The stability of the states of equilibrium of nonholonomic systems

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 1, 1965, 46-53

TOPIC TAGS: stability criterion, oscillatory system, applied mathematics

ABSTRACT: The problem of the stability of the states of equilibrium of nonholonomic systems was discussed by E. T. Whittaker (1937), O. Bottema (1949), H. A. Ayzerman and F. R. Gantmakher (1957), A. N. Obmorshev (1955), G. N. Knyazev (1963), and others. The methods proposed by them for the investigation of stability, however, do not agree even from the viewpoint of the nature of the null roots. A survey of these papers is given in the present work by the authors. It indicates not only the absence of a single unique approach to the problem of the stability of the states of equilibrium of nonholonomic systems, but also a number of contradictions in the method of investigation of the stability. As shown in the present work, a nonholonomic system possesses the property that its states of equilibrium cannot be isolated, but forms a manifold whose dimension is not less than the num-

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L 54607-65

ACCESSION NR: AP5006255

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ber of nonholonomic constraints. This property is the determining condition for the presence of null roots in the characteristic equation. The authors formulate a theorem concerning the asymptotic stability of the manifold of the states of equilibrium. The discussion is illustrated by several examples: the motion of a solid body parallel to an inclined plane, and the motion of an axially symmetrical body bounded from below by a spherical surface which can roll without slippage in a spherical bowl of different radius. Orig. art. has: 4 figures, 22 formulas.

ASSOCIATION: none

SUBHITTED: 19Jun64

ENCL: 00

SUB CODE: KA, KE

NO REF SOV: 004

OTHER: 002

Card 2/2

L 43883-65

ACCESSION IIR: AP5006849

5/0020/65/160/004/0781/0784

AUTHOR: Neymark, Yu. I.; Fufayev. N. A.

TITLE: Stability of equilibrium states of nonholonomic systems

SOURCE: AN SSSR. Doklady, v. 160, no. 4, 1965, 781-784

TOPIC TAGS: nonholonomic system, equilibrium state, stability, characteristic equation

ABSTRACT: It is shown that a monholonomic system has a singularity in that its equilibrium states cannot be isolated, but form a manifold the dimensionality of which is equal to the number of equations of nonholonomic constraints. This singular v gives rise to zero roots of the characteristic equation. A theorem is formulated concerning the asymptotic stability of the manifold of equilibrium states. The theory is illustrated by means of an example of an axially symmetrical body, bounded from below by a spherical surface, which can rock without sliding in a spherical cup. This report was presented by A. Yu. Ishlinskiy. Orig. art. has: 2 figures and 16 formulas.

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513820018-3

ACC NR. AP6032847 (A) SOURCE CODE: UR/0020/66/170/003/0533/0536

AUTHORS: Neymark, Yu. I.; Fufayev, N. A.

ORG: Scientific Research Institute of Applied Mathematics and Cybernetics at Gor'kiy State University imeni N. I. Lobachevskiy (Nauchno-issledovatel'skiy institut prikladnoy matematiki i kibernetiki pri Gor'kovskom gosudarstvennom universitete)

TITLE: On the problem of track stability of vehicles on pneumatic tires

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 533-536

TOPIC TAGS: stability criterion, potential energy, kinetic energy, motor vehicle, aircraft tire

ABSTRACT: Using the various theorems first derived by M. V. Keldysh, an analysis is made of oscillations of a vehicle with pneumatic tires. The equations of motion for a vehicle with m-pneumatic tires are written for small departures from a straight line motion, along the OY-axis, with a constant speed V. The vibration of the tires (without slipping) is given by the two equations

$$\dot{x}_{i} + \dot{\xi}_{i} + V0_{i} + V\phi_{i} = 0; \quad \dot{\theta}_{i} + \phi_{i} - \alpha_{i}V\xi_{i} + \beta_{i}V\phi_{i} + \gamma_{i}V\chi_{i} = 0,$$

$$\dot{t} = (1, 2, ..., m),$$

and the kinetic energy of the system is given by

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DDC: 531

ACC NR: AP6032847

$$\frac{d}{dt}\frac{\partial T}{\partial q_j} - \frac{\partial T}{\partial q_j} = Q_j + \sum_{i=1}^m \left(\frac{\partial U}{\partial \xi_i}\frac{\partial x_i}{\partial q_j} - \frac{\partial U}{\partial \chi_i}\frac{\partial \chi_i}{\partial q_j} + \frac{\partial U}{\partial \overline{\varphi}_i}\frac{\partial \theta_i}{\partial q_j}\right)_i$$

$$(J = 1, 2, \dots, n).$$

These equations are then simplified by using the assumption of very large speed V. This leads to the result

$$\dot{x}_i + \frac{1}{\beta_i} \dot{\theta}_i = -\frac{\alpha_i}{\beta_i} V \xi_i + \frac{\gamma_i}{\beta_i} V \chi_i - V \theta_{i-1}$$

Three more equations are derived by taking the derivative of the potential energy U, with respect to the three coordinates $\boldsymbol{\xi}_{i}$, $\boldsymbol{\chi}_{i}$, $\boldsymbol{\varphi}_{i}$. These equations are then

designated as generalized lead-angle hypotheses. As an example, the vibration of an airplane chassis with three pneumatic wheels is discussed. This paper was presented by Academician A. Yu. Ishlinskiy on 23 December 1965. Orig. art. has: 15 equations.

SUB CODE: \3 / SUBM DATE: 23Dec65/ ORIG REF: 008/ OTH REF: 006

Card 2/2

L 45825-65 EEO-2/EWT(d)/FBD/FSS-2/EWT(1)/FS(v)-3/EEC(k)-2/EWG(v)/EEC-4/EED-2/EWA(c) Pn-4/Po-4/Pe-4/Pq-4/Pg-4/Pae-2/P1-4/Pk-4/P1-4 TT/GW/EC

ACCESSION NR AM5001722

BOOK EXPLOITATION

5/B+

Gordeyev, Leonid Twanovich; Zakolodyazhnyy, Vitaliy Pavlovich; Suvorov, Yevgeniy Fadorovich; Fufayev, Vadim Alekseyevich; Churov, Yevgeniy Petrovich

Cosmic beacons in navigation (Kosmicheskiye mayaki v navigatsii), Mcscow, Voyenizdat M-va obor. SSSR, 1964, 201 p. illus., biblio. 2,300 copies printed.

TOPIC TAGS: navigation, guidance, artificial earth satellite, space communication, satellite communication, navigation system Transit

PURPOSE AND COVERAGE: This book acquaints the reader with the principles of the use of artificial earth satellites for navigation. It considers the effectivemess of a satellite navigation system in determining location at sea, laws of motion and methods of predicting the position of satellites in space at the moment of observation. Methods of determining ship position from observations of earth satellites and possibilities of measuring navigational parameters are cited. The book describes the effect of the atmosphere and ionosphere on the accuracy of these parameters. A generalized presentation of a navigational system and its elements is given. The concluding chapter of the book acquaints the reader with the American satellite navigation system "Transit". The book

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L 45525-65

ACCESSION NR AMSUO1722

is written from materials of the foreign press and is intended for a broad audience interested in problems of mavigation.

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Ch. III. Methods of determining ship position at sea using a navigation earth satellite - 66

Ch. IV. Possibilities of measuring navigation parameters to determine ship position from an earth satellite - 95

Ch. V. Effect of the atmosphere on the accuracy of navigation parameters ob-

tained by radio - 119 Ch. VI. Elements of a navigation system with artificial earth satellites — 134 Ch. VII. The American navigation system "Transit" -- 169

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00

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ACCESSION NR AM5001722

SUBMITTED: 21Mar6l;
NO REF SOV: 010

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16(1) 16.3500

68800 5/020/60/131/01/009/060

AUTHOR: TITLE:

Fufayev, V.V.

PERIODICAL:

On Dirichlet Problem for Regions Having Corners

ABSTRACT:

Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 37-39 (USSR) Let the boundary Γ of Ω be a smooth curve of the class $H_{\infty}^{r+2+1/p}$ of S.M. Nikol'skiy, the ends of which meet under an angle ω , such that there arises a corner. Finite pieces of Γ near the corner P are assumed to be linear. Let the length

of Γ be 1 and let it be counted from the corner.

Theorem 1: Let r, $\frac{r-1}{p}$ be non-integer positive numbers, U an harmonic function of x and y, $U \in W_{p}^{r} H^{d}(\Omega)$, r + d = r.

Then f(s)=0 has the properties 1.) $f(s) \in \mathbb{E}_p^{r-1/p}$ ([0,1])

2.) in the case $\omega = \frac{\pi}{j}$, j = 1, 2, ... it is $f^{(kj)}(+0) =$

Card 1/3

15

On Dirichlet Problem for Regions Having Corners S/020/60/131/01/009/060

=
$$(-1)^k f^{(kj)}$$
 (-0) for all $k = 0,1,2,...$, for which $k_j < \overline{g}$,

where $g = \frac{r-1}{p} = \overline{g} + \beta$, $0 < \beta < 1$. If $\overline{g} = mj$ (m integer), then it is moreover

$$\left(\int_{0}^{h} \left|f^{\left(mj\right)}\left(u\right) - \left(-1\right)^{m} f^{\left(mj\right)}\left(-u\right)\right|^{p} du\right)^{1/p} \leqslant ch^{\beta}$$

Theorem 2 is complete converse of theorem 1 in the case

$$\omega = \frac{\widehat{i}}{\widehat{j}}$$
, $j = 1, 2, ...$

Theorem 3 shows that, if $\omega + \frac{\mathcal{E}}{j}$, the converse (theorem 2) only holds in the case $r - \frac{2}{p} < \frac{\mathcal{E}}{\omega}$.

The proofs are based on potentials of a double layer and on conformal mappings.

Card 2/3

00386

On Dirichlet Problem for Regions Having Corners S/020/60/131/01/009/060

N.P. Mozzherova, Ya.S. Bugrov, N.M. Gyunter, Kh.L. Smolinskiy are mentioned.

There are 7 references, 5 of which are Soviet, 1 German, and

PRESENTED: November 10, 1959, by I.M. Vinogradov, Academician

SUBMITTED: November 9, 1959

Card 3/3

FUFAYEV, V.V.

Conformal transformations of cornered regions, and the differential properties of the solutions to Poisson's equation in cornered regions. Dokl. AN SSSR 152 no.4: 838-840 0 '63. (MIRA 16:11)

1. Moskovskiy fiziko-tekhnicheskiy institut. Predstavleno akademikom S.L. Sobolevym.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513820018-3"

ASRIYANTS, A.I., dots., kend. tekhn.nauk; YEFIGMOV, V.V., prof., doktor tekhn. nauk, red.; FUFAYEVA, G.I., red.; CHIZHEVSKIY, E.M., tekhn. red.

[Reconditioning parts by metallization] Vosstanovlenie detalei metallizatsiei; po kursu "Proizvodstvo i rement avtomobiloi (uchebnoe posobie). Pod red. Efremova. Moskva, Rosvuzizdat, 1963. 24 p. (MIRA 16:12) (Metal spraying)

DALIDCHIK, I.D.; FUFAYEVA, G.I., red.; YASHCHUKOVA, N.V., tekhn. red.

[Progressive methods of metal welding] Progressivnye metody svarki metallov; uchebnoe posobie.[n.p.] Rosvuzizdat, 1963. 57 p. (MIRA 16:12)

GRINBERG, B.G.; IVASHCHENKO, T.M.; FUFAYEVA, G.I., red.; EGGERT, A.P., tekhn. red.; BARANOV, Yu.V., tekhn. red.

[Metallography and the heat treatment of metals; guide to laboratory work] Metallovedenie i termicheskaia obrabotka; rukovodstvo k laboratornym zaniatiam. Moskva, Rosvuzizdat, 1963, 179 p.

(Metallography) (Matals--Heat treatment)

(Metallography) (Metals--Heat treatment)

PARAKHIN, V.A., kand. tekhn. nauk; FROLOV, V.V., dots., kand.tekhn. nauk; SHORSHOROV, M.Kh., dots., kand. tekhn. nauk; GOSPODAREVSKIY, V.I., insh.; SUBBOTIN, Yu.V., insh.; KURKIN, S.A., dots., kand. tekhn. nauk; VINOKUROV, V.A., dots., kand. tekhn. nauk; KAGANOV, N.L., dots., kand. tekhn. nauk; SHASHIN, D.M., kand. tekhn. nauk; AKULOV, A.I., dots., kand. tekhn. nauk; NAZAROV, S.T., dots., kand. tekhn. nauk; YEVSEYEV, G.B., dots., kand. tekhn. nauk; NIKOLAYEV, G.A., prof., doktor tekhn. nauk, red.; TITOVA, V.A., red.; FUFAYEVA, G.I., red.; CHIZHEVSKIY, E.M., tekhn. red.

[Laboratory work on welding] Laboratornye raboty po swarke. Moskwa, Rosvusisdat, 1963. 274 p. (MIRA 16:8)

1. Nauchno-pedagogicheskiy kollektiv Kafedry svarochnogo proizvodstva Moskovskogo vysshego tekhnicheskogo uchilishcha (for all except Nikolayev, Titova, Fufayeva, Chizhevskiy).

2. Zaveduyushchiy kafedroy "Mashiny i avtomatizatsiya svarochnykh protsessov" Moskovskogo vysshego tekhnicheskogo uchilishcha (for Nikolayev).

(Welding-Study and teaching)

YUDIN, V.A.; BARASOV, G.A.; FUFAYEVA, G.I., red.; CHIZHEVSKIY, E.M., tekhn. red.

[Collection of problems and examples in the theory of mechanisms and machines] Sbornik zadach i primerov po teorii mekhanizmov i mashin. [n.p.] Rosvuzizdat, 1963. 282 p.

(MIRA 16:10)

(Mechanical engineering--Problems, exercises, etc.)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513820018-3"

"APPROVED FOR RELEASE: 06/13/2000 CI

CIA-RDP86-00513R000513820018-3

VORONKOV, Ivan Mikhaylovich, prof.; AYZENBERG, Tusya Bentsionovna; FUFAYEVA, G.I., red.

[Theoretical mechanics; program, methodological instructions and tests for students of correspondence institutions of higher education (scope of the course according to the study plan for 140-160, 180-190 and 200-220 hours)] Teoreticheskaia mekhanika; programma, kratkie metodicheskie ukazaniia i kontrol'nye zadaniia dlia studentov zaochnykh vysshiikh uchebnykh zavedenii (ob"em kursa po uchebnomu plamu 140-160, 180-190 i 200-220 chasov). Izd.5. Moskva, Vysshaia shkola, 1961. 130 p. (MIRA 17:9)

TOKAREV. V.L.; FUFAYEVA, G.I., red.

[Experimental determination of the kinematic and dynamic characteristics of machines, methodological manual on the theory of machanisms and machines] Eksperimental nee opredelenie kinematicheskikh i dinamicleskikh kharakteristik mashin; uchebno-metodicheskoe posobie po teorii mekhanizmov i mashin. [n.p.] Vysshaia shkola, 1964. 29 p. (MIRA 18:4)

FADEYEV, Sergey Pavlovich[deceased]; ZYBIN, V.P., doktor tekhn. nauk, retsenzent; POKHOVSKIY, A.M., kand. tekhn. nauk, dots., nauchn. red.; FUFAYEVA, G.I., red.

[Preparation of a course project on machine parts] Kurso-voe proektirovanie detalei mashin. Moskva, Vysshaia shkola 1964. 302 p. (MIRA 18:2)

1. Zaveduyushchiy kafedroy "Detali mashin" Vsesoyuznogo zaochnogo mashinostroitel nogo instituta (for Zybin).

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513820018-3"

VASILENKO, Aleksey Nikolayevich, kand. tekhn. nauk; DRYZHAKOV,
Yevgeniy Vasil'yevich, dots.; ISAYEV, Sergey Ivanovich,
kand. tekhn. nauk; KORNEYCHUK, Nikolay Karpovich,
kand. tekhn. nauk, dots.; KOFANOV, Vyacheslav Ivanovich;
assistent; KRUTOV, Vitaliy Ivanovich, doktor tekhn. nauk,
prof.; MIRONOV, Boris Mikhaylovich, kand. tekhn. nauk;
NICMATULIN, Iskander Nigmatulevich, doktor tekhn. nauk, prof.;
NOSOV, Mikhail Vasil'yevich, prof.; SAMOYLOV, Mikhail
Sergeyevich, assistent; SPORYSH, Igor'Pavlovich, kand. tekhn.
nauk, prof.; KHVOSTOV, Viktor Ivanovich, kand. tekhn. nauk;
SHISHOV, Yevgeniy Viktorovich, kand. tekhn. nauk; YUDAYEV,
Boris Nikolayevich, kand. tekhn. nauk, dots.; KUTYRIN, I.N.,
dots., kard. tokhn. nauk, reteranty SHVEROY, A.M., dots.,
retsenzent; TUPITSYNA, L.A., red.; FUFAYEVA, G.I., red.

[Problems in technical thermodynamics and heat transfer] Sbornik zadach po tekhnicheskoi termodinamike i teploperedache. [By] A.N. Vasilenko i dr. Moskva, Vysshaia shkola, 1964. 369 p. (MIRA 17:4)

1. Prepodavatel skiy kollektiv kafedry termodinamiki i teploperedachi Koskovskogo vysshego tekhnicheskogo uchilishcha (for all except Kutyrin, Shvedov, Tupitsyna, Fufayeva). 2. Koskovskiy aviatsionnyy institut (for Kutyrin, Shvedov).

GLUSHKOV, G.S.; SINDEYEV, V.A.[deceased]; BEZUKHOV, N.I., doktor tekhn. nauk, prof., 2asl. deyatel' nauki i tekhniki RSFSR, retsenzent; KOPYLENKO, V.P., prof., nauchn. red.; FUFAYEVA, G.I., red.

[Course in the strength of materials] Kurs soprotivlenia materialov. Moskva, Vysshaia shkola, 1965. 767 p.

(MIRA 18:5)

VOROBIYEV, Kharlandiy Sargayavi, A. MAZUROV, Dmitriy Yakovikii h.; SOKOLOV, Aleksay Aleksandrovich. Prinimal uchastiye SEVASTIYANOV, Ye.F.: FUFAYEVA, G. L., red.

[Heat-engineering processes and the equipment of sideate using industries] Peolitekomologicheekie proteersy Lapparaty silikatnykh projevodstv. Moskva, Vysshais shkola, 1965. 7/2 p. (MIRA 18:8)

FUFAYEVA, G.I., red.

[Program for the course "Theoretical principles of electrical ergineering" for engineering and technical professions in institutions of higher learning] Programma kursa "Teoreticheskie osnovy elektrotekhniki" dlia inzhenerno-tekhnicheskikh spetsial nostei vysshikh uchebnykh zavedenii. Moskva, Vysshaia shkola, 1961. 18 p. (MIRA 19:1)

1. Russia(1923- U.S.S.R.) Uchebno-metodicheskoye upravleniya po vysshim uchebnym zavedeniyam.

NYURENBERG, Vladimir Arkad'yevich; MLODZEYEVSKAYA, Irina Aleksandrovna; YEFIMOV, A.P., otv. red.; FUFAYEVA, M.N., red.; CHURAKOVA, V.A., tekhn. red.

> [Fundamental principles of the design of automatic broadcast level regulators] Osnovnye polozheniia po raschetu avtomaticheskikh reguliatorov urovnia veshchatel'nykh peredach. Moskva, Svias'izdat, 1963. 52 p. (MIRA 16:10) (Radio--Transmitters and transmission)

GORON, L.Ye., red.; VLNG.ENYUK, L.I., red.; MUF YEV), h.N., [Stereophony] Stereofoniia: Informatsionnyi sbornik.
Moskva, Sviazi, 1964. 100 p. (EFRF 17:11)

SAMOYLOV, Vladimir Fedorovich; MAKOVEYEV, Vladimir Grigor'yevich; FUFAYEVA, M.N., red.

[Pulse techniques] Impul'snaia tekhnika. Moskva, Izd-vo "Sviaz'" 1964. 279 p. (MIRA 17:5)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513820018-3"

DUBINSKIY, Leonid Mikhaylovich; FURMAN, S.L., otv. red.; FUFAYEVA, M.N., red.

[Power supply of television receivers] Bloki pitaniia televizionnykh priemnikov. Moskva, Sviaz', 1964. 93 p. (Biblioteka "Televizionnyi priem, no.15) (MIRA 17:12)

CHISTYAKOV, Nikolay Iosafovich; KASHITSIN, A.I., retsenzent; AMALITSKIY, N.V., retsenzent; FUFAYEVA, M.N., red.

[Principles of radio communication and radio relay lines] Osnovy radiosviazi i radioreleinye linii. Moskva, Sviaz', 1964. 325 p. (MIRA 18:2)

1. Alma-Atinskiy tekhnikum svyazi (for Amalitskiy).

SAMOYLOV, G.P., otv. red.; FURMAN, S.L., otv. red.; FUFAYEVA, M.N., red.

[Television receivers; a reference album] Televizionnye priemniki; al'bom spravochnik. Moskva, Sviaz', 1964.
71 p. (Biblioteka "Televiziomyi priem," no.16)
(MIRA 18:4)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513820018-3

L 18048-63 EPF(n)-2/EWP(q)/EWT(m)/BDS AFFTC/ASD/SSD Pu-4 WW/JD/JG ACCESSION NR: AP3002846 S/0126/63/015/006/0873/0879

AUTHORS: Butra, F. P.; Yevkina, Z. F.; Fufayeva. Q. L.

TITLE: Structural variation in alpha-uranium monocrystals deformed by stretching to the rupture point

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 6, 1963, 873-879

TOPIC TAGS: stretching effect, alpha-uranium, structural variation

and recrystallization in the -phase were deformed by stretching at room temperature. X-ray photographs showed structural variations in monocrystals with
respect to deformation degree. Small deformations caused extension of all the
spots on the Laue diffraction patterns. Further stretching caused the disappearance of the Laue spots and the appearance of separate maxima of the characteristic
radiation located irregularly on the Debye rings. Still further deformation
caused an orderly arrangement of the maxima. The maximum deformation (close to
the rupture point) produced the appearance of an axial texture with [0017] axis.

Card 1/2

L 18048-63

ACCESSION NR: AP3002846

Because all the experiments showed only the texture with the [0017 axis, it was assumed that plastic deformation of \approx -uranium at room temperature proceeds mainly by gliding along (010) - [100] and by twinning [130] - < 310 >. Orig. art. has: 8 figures.

ASSOCIATION: none

SUBMITTED: 16Nov62

DATE ACQ: 23Jul63

ENGL:

SUB CODE: ML, PH

NO REF SOV: 001

OTHER:

2/2

CIA-RDP86-00513R000513820018-3" APPROVED FOR RELEASE: 06/13/2000

L 9558-66 ENT(m)/EPF(n)-2/EWP(t)/EWP(b) ACC NR. AP5026444 ES/JD/WW/10/GG UR/0089/65/019/004/0372/0380 SOURCE CODE: F. F.; Yevkina. F.; Fufayeva, O. L.; Korobeynikov. ORG: none TITLE: The effect of temperature and neutron irradiation on plastic deformation of alpha uranium monocrystals 4 SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 372-380 TOPIC TAGS: radiation defect, radiation damage, neutron bombardment, uranium ABSTRACT: The effect of temperature, crystal orientation, and neutron irradiation on the plastic deformation of alpha uranium monocrystals was investigated. The shape of the stress-strain curves of unirradiated samples was explained in terms of the plastic deformation modes. The effect of neutron irradiation on plastic deformation was investigated on 9 x 1.5 x 0.4-0.5 mm monocrystalline samples grown by $\beta + \alpha$ recrystallization. The samples were exposed to integrated fluxes (nvt) up to 10¹⁷ n/cm² and to 4x 10²⁰ n/cm² at temperatures not exceeding 100C and subjected to tensile tests. X-rays and metallographic investigations have shown that exposure to nvt up to 1.6 x 10¹⁵ n/cm² does not change the plastic deformation mode. In crystals in which initial deformation occurred by slip along the plane (010) the yield point increased rapidly at small nvt, reaching saturation at 1017 n/cm2. Irradiation caused a 3-5-fold increase in UDC: 621.039.553

UB CODE:	ss/	SUBM DATE:	22Feb65/	ORIG REF:	006/	OTH REF:	012/	ATD	PRESS:	
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MOROZOVA, L.N.; MIRONOVA, G.V.; FUFAYEVA, R.A.; KOVALEVA, V.A.

Effect of acupuncture in different points of influence on the mediator function of the nervous system. Shor. trud. GMI no.9:73-80 162. (MIRA 17:2)

1. Iz kafedry gospital noy terapii lechebnogo fakul teta i terapevticheskogo otdeleniya oblastnoy bol nitsy (zav. - prof. V.G. Vogralik), Gor'kiy.

YEFIMOV, A.S., kand. med. nauk; SMEDIER, R.I.; FEFAYEVA, E.A. (Gor'kiy)

"Goiter heart", its pathogenesis, clinical and electrocardiographic characteristics and classification. Probl. endok. 1
gorm. 9 no.6:64-71 N-D '63.

(MRA 17:11)

1. Iz kafedry gospital'ney terapii (zav. - prof. V.G. Vogralik)
Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.

FUFEZAN 1. . HUNGARY Chemical Technology. Chemical Products and Their COUNTRY Applications. Synthetic Polymers. Plastics. CATEGORY : RZhKhim., No 17, 1959, No. 62748 ABS. JOUR. : Szabo, A.; Soo, A.; Elonataki, L.; Juigean, I. AUTHOR New Commercial Application of Ureaformaldehyde INSTITUTE TITLE : Kolozsvari egyet kozl. Termeszettud. sor., 1957, ORIG. PUB. 2, No 1-2, 119-126 : The urcaformaldehyde resin was obtained by condensation of urea (in water solution with approx. ABSTRACT 12% concentration) and formaldehyde in a molal ratio of 1:3. The condensation reaction was conducted at the hoiling point in the course of 10 hours (nH of 6.2 - 6.5), then the resin was concentrated by evaporation at the residual pressure of 11 mm and 600 temperature. It is proposed to employ the obtained resin in place of the nitro--glue in the shoe industry. Stability of the glue resin is 2-3 weeks. -- L. Pesin. Card: 1/1

COUNTRY CATEGORY : Chemical Technology. Leather. Fur. Gelatine.

Tanning Materials. Industrial Proteins. RZKhim., No. 20 1959, No. 73622

: RZKhim., No.20 ABS. JOUR.

AUTHOR INST.

: Szabo, A.; Spo, A.; Elopataki, L.; Fufezan, I.

: Preparation of Activated Charcoal from Collagen-Containing Industrial Waste TITLE

: Kolozsvari egyet. kozl. Terreszettud. sor., ORIG. PUB.

1957, 2, No 1-2, 127-134

: Description of experiments which show the possibility of utilizing sole-leather waste for making activated charcoal of standard quality. A finer grinding of the raw material increases the activity of finished product. To obtain charcoal of higher activity it is necessary to subject the raw material to a two-fold cheminecessary to subject the raw material to subject the activation with hot air. Preliminary defatting of the waste does not improve the quality of the charcoal. Optimal temperature and duration of carbonization, 750° and 6 hours temperature of second treatment with air, about 350°. In determining the activity the iodometric method can not be

CARD: 1/2

135

COUNTRY CATEGORY

Hungary

H-35

PPROVED FOR RELEASE: 06/13/2000, CIA-RDP86-00513R000513820018-3

AUTHOR INST. TITLE

ORIG. PUB. :

: used. It is possible to utilize the method based on adsorption of acetic acid. -- S. Rozenfel'd.

CARD: 2/2

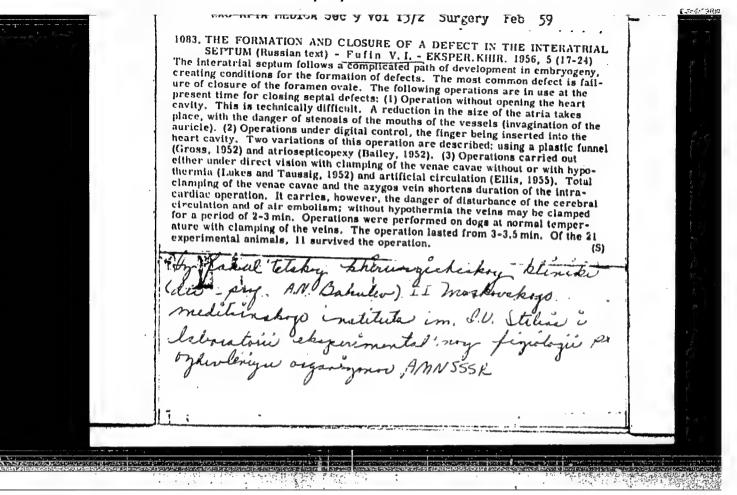
EWP(t)/ETI IJP(c) JD/JH L 33363-66 SOURCE CODE: RU/0017/65/000/009/0478/0480 ACC HR. AP602/601 AUTHOR: Vasiliu. A. (Engineer): Fufezan. P. ORG: [Vasiliu] Ministry of Machine Building Industry (Ministerul Industriei Constructiilor de Masini); [Fufezan] "23 August" Works, Bucharest (Uzinele "23 August") TITLE: Observations concerning the plastic strain of ACD aluminium alloy for pistons SMIRCE: Metalurgia, no. 9, 1965, 478-480 TOPIC TAGS: aluminum base alloy, engine piston/ACD aluminum base alloy ABSTRACT: The authors summarize the principal precautions that must be taken to assure the good quality of ACD aluminum alloy for pistons. The measures mentioned include accuracy and avoidance of casting interruptions during the preparation, reduction of friction coefficients during extrusion through the assurance of good tool surfaces, abiding by speed and time parameters, and homogenous heating. Orig. art. has: 7 figures. [Based on authors' Eng. abst.] [JPRS: 33,732] SUB CODE: 11, 13 / SUBM DATE: none / ORIG REF: 002 Cord 1/1 UDC: 669.715:621-2/

CHISU, Alexandru, conf. ing.; FUFEZAN, V., ing.; POPA, M., ing.; POP, S., ing.

> Contributions to the increase of durability of bridges and ingot molds during exploitation. Metalurgia constr mas 14 no. 3:193-199 Mr 162.

1. Institutul politehnic, Cluj (for Chisu).

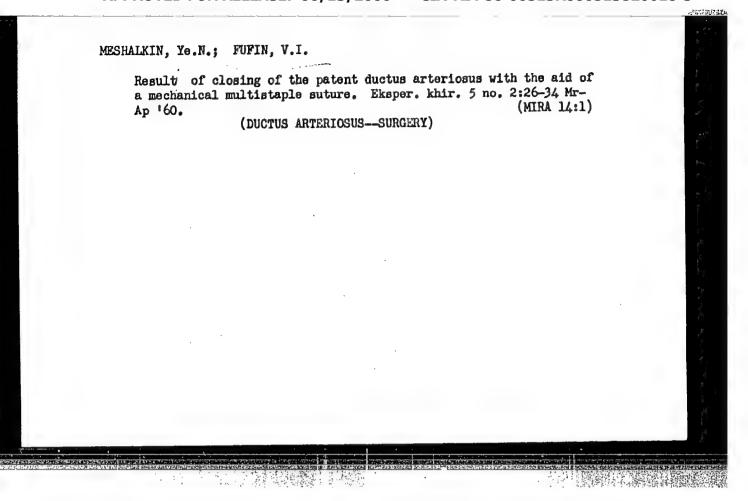
2. Intreprinderea metalurgica, Aiud (for Fufezan, Popa).



Meshalkin, E. N., Medvedev, I. A., and Fufin, V. I.

"A new method for the closure of a patent ductus arteriosus with a mechanical clip suture." Novye khirurgicheskie apparaty i instrumenty i opyt ikh primeneniya, No. 2, 1958, p. 13.

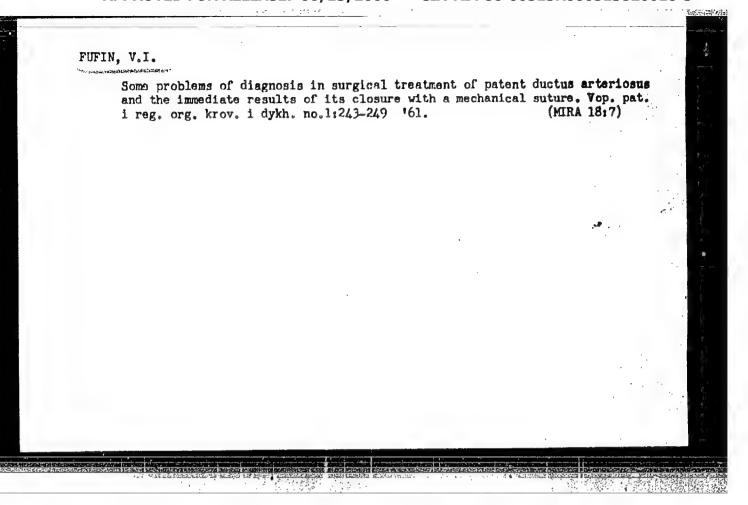
Cent. Inst. Advanced Training of Physicians



MIKAYELYAN, A.L.; ANTONOV, O.S.; FUFIN, V.I.

Diagnosis of patent ductus arteriosus. Vop. pat. 1 reg. org. krov. 1 dykh.
no.1:233-241 '61.

(MIRA 18:7)



MESHALKIN, E. N., prof.; FUFIN, V. I.

A method for closing patent ductus arteriosus with a mechanical suture. Khirurgiia, Sofia 14 no.2/3:194-199 '61.

1. Institut po eksperimentalna biologiia i meditsina na sibirskoto otdelenie na AN na SSSR.

(DUCTUS ARTERIOSUS surg)

BUTEYKO, K.P.; ZHUK, Ye.A.; FUFIN, V.I.

ECG in patent ductus arteriosus and its changes following closure of the duct. Eksper. khir. i anest. 9 no.1:11-13 Ja-F *64.

(MIRA 17:12

l. Iaboratoriya funktsional'nykh metodov issledovaniya (zav. K.P. Buteyko) Instituta eksperimental'noy biologii i meditsiny (dir. - prof. Ye.N.Meshalkin) Sibirskogo otdeleniya AN SSSR, Novosibirsk.

VINCGRADOVA, T.S., starshiy nauchnyy soteudnik; VLASOV, Yu.A.: FUFIN, V.1.

Characteristics of blood flow in patent ductus arteriosus.
Pat. fiziol.i eksp.terap. 9 no.4:70-76 J1-Ag 165. (MIRA 18:9)

1. Laboratoriya modelirovaniya kroveobrashcheniya (zav. - starshiy nauchnyy sotrudnik T.S.Vinogradova) Instituta eksperimental noy biologii i meditsiny (direktor - Yu.I.Borodin) Ministerstva zdravookhraneniya RSFSR, Novosibirak.

L 25994-66 EWT(d)/EWP(1) IJP(c)

ACC NR. AP6012542

SOURCE CODE: UR/0040/66/030/002/0236/0242

AUTHORS: Neymark, Yu. I. (Gor'kiy); Fufayey, N. A. (Cor'kiy)

ORG: none

5000 B

TITLE: Stability of steady motions of holonomic and nonholonomic systems

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 2, 1966, 236-242

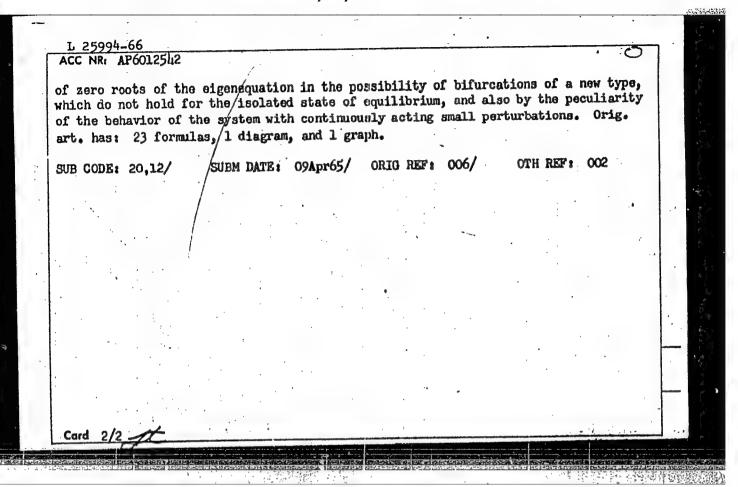
TOPIC TAGS: motion stability, pendulum mechanics, perturbation.

coordinate system,

ABSTRACT: It is shown that dynamic systems with a manifold of steady motions possess a number of singularities. Some results of a theoretical study are illustrated by an example of a plane pendulum. A system with incomplete dissipation of mechanical energy whose motion is described by

$$\left(\frac{d}{dt}\frac{\partial L}{\partial q_j} + \sum_{i=1}^{m} h_{ij}q_i^* = \frac{\partial L}{\partial q_j}, \quad \frac{d}{dt}\frac{\partial L}{\partial \omega_k} = 0 \quad \left(\begin{cases} j=1,2,\ldots,m\\ k=1,\ldots,n-m \end{cases}\right)$$

is considered. In the case of holonomic as well as nonholonomic systems, the steady motions form a manifold of a certain dimensionality q > 0. In the case of a holonomic system, q > n - m. The singularities of the system are expressed by the presence Cord 1/2



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(First 18:19)

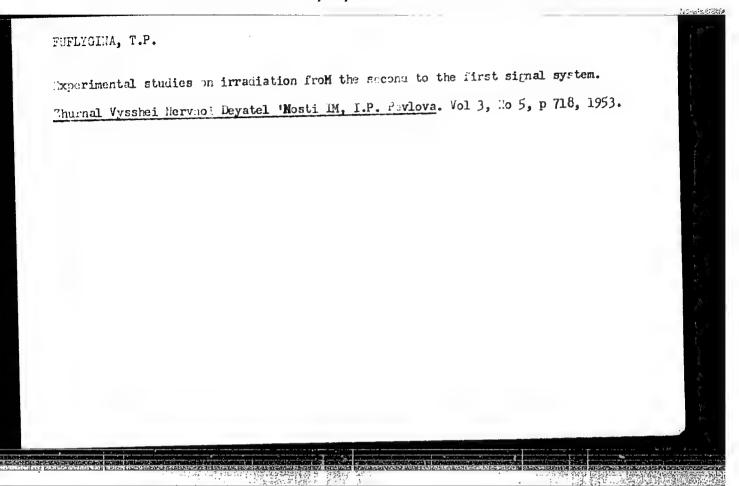
KREMMISVA, L.A.; MERVEDEV, 1.A., dotront; FUFINA, N.1. Labor following releadion of the north for conrection and it. replacement by plantin prootheris. Akach. i gin. co. 0:325-346

> 1. Indiana che, coincatal new producti i restacing Mai, to st . s brown't ameniya BUPUR (complayy relevenite) - prof. Te. H. Markellin; impolnyavashebiv obyavanac, ti lipolitore - detecat Youl. Borolin) i akushorsko-glackologi berkeye otdeleniya belinite/ ("laynyy vouch b. A. Chevalkov) Sthireke to observe the Link.

FUFLYGIN, N.D.

New method of track maintenance in a junction point. Put'i put.khoz. 5 no.5:18-19 My '61. (MIRA 14:6)

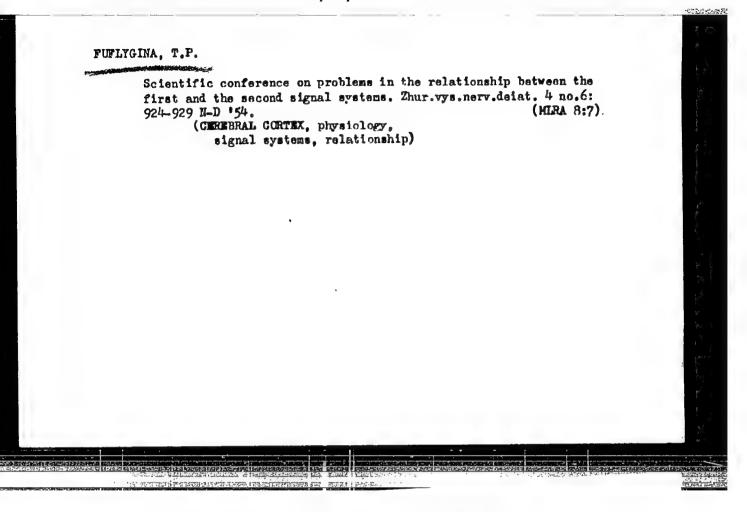
 Starshiy dorozhnyy master, st. Perm^e II, Sverdlovskoy dorogi. (Railroads--Maintenance and repair)



SAVEL'YEVA, Yo.; MONASTYREVA, M.; ORLOVA, G.; KUZEYEV, A.; FUFLYGINA, T.; LASKINA, V.; KOVALEVAYA, Yo.V.

Effect of factors of external environment on the course of rheumatism in children. Pediatriia, Moskva no.4:40-41 July-Aug 1953. (CIML 25:1)

1. Sixth course students under the supervision of Docent Ye. V. Kovaleva. 2. Of the Scientific Student Circle of the Department of Children's Diseases (Head of Department -- Prof. Yu. F. Dombrovskaya, Corresponding Member AMS USSR) of First Moscow Order of Lenin Medical Institute.



V-12

FUFLYGINA, T.P.

USSR/Human and Animal Physiology - Nervous System.

: Ref Zhur - Biol., No 1, 1958, 4470

Abs Jour

T.P. Fuflygina Institute of the Higher Nervous Activity, Academy of Author Inst

Sciences USSR

On the Changes of Verbal Reaction to Verbal Stimuli in Children under the Action of External Inhibition. Title

Tr. In-ta vyssh. nerv. devatel nosti AN SSSR, ser. Orig Pub

patofiziolog., 1956, 2, 34-45

: A fixed verbal reaction in an associative experiment Abstract

(for instance: sky - blue) was altered (sky - clouded) in 42 students, age bracket 8, 12 and 16. The effects of the external inhibition led to increased latent period of the reaction without changes of its new property, or disinhibition of the earlier verbal connection,

Card 1/2

NH 06/13/2000 CIA-RDP86-00513R000513820018-3 FUFLYGINA, T.

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V-12

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T.P. Fuflygina Author

Institute of the Higher Nervous Activity, Adacemy of Inst

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Second to the First Signalling System.

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The association experiment included definitions of direct stimuli of conditioned motor reactions (words like Abstract

"red", "blue", etc). After the extinction of one of the responsive reactions light stimuli ware applied. Children between 11 and 12 years of age showed either eclectic inhibition of the connection corresponding to the

extinct verbal reaction, diffused extinction of motor

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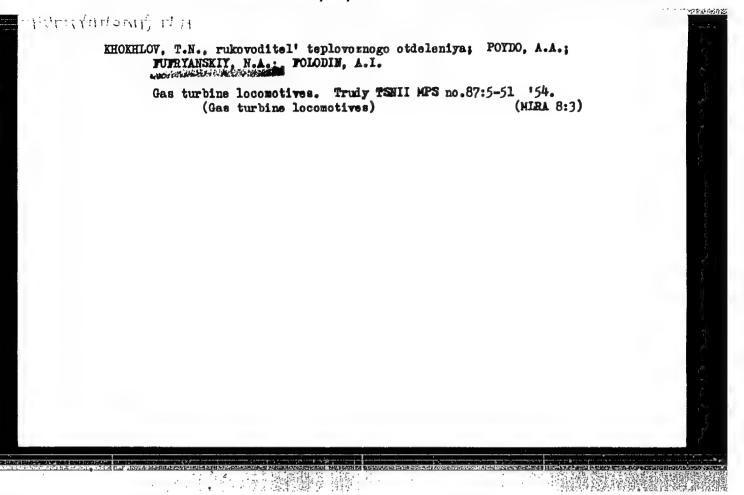
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FUFRYANGKIY, Nikolai Aleksandrovich,

Academic degree of Doctor of Technical Sci, based on his defence, 17 December 1954, in the Council of the All-Union Inst of Railroad Transport, of his dissertation entitled: "Research into locomotive gas plants".

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no 6, 19 Mar 55, Byulleten MVO SSSR, NO. 14, July 56 Moscow pp 4-22, Uncl. JPRS/NY-429



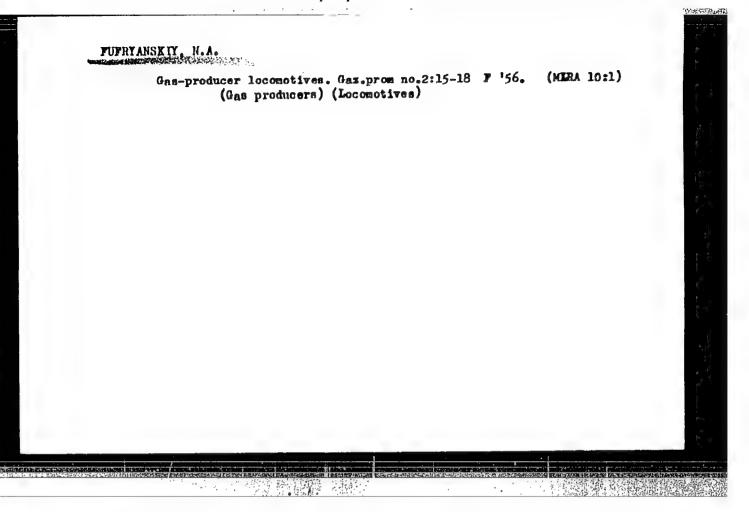
IVANOVA, N. I.: LOSHAK, V. I.: MFFAKSA, V. A.: RATNER, M. P.: FUFRYANSKIY, N. A., kandidat tekhmicheskikh nauk, redaktor: VERINA, G. P.; ** tekhmicheskikh nauk, redaktor: VERINA, G. P.

FUFRYANSKIY, He, doktor tekhn.nauk; YAKOBSON, P., kand.tekhn.nauk

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GINZBURG, D.B., doktor tekhnicheskikh nauk, redaktor; KANTOROVICH, B.V.,
doktor tekhnicheskikh nauk, professor, redaktor; WIFEYAMSKIY, N.A.,
doktor tekhnicheskikh nauk, professor, redaktor; WIFEYAMSKIY, N.A.,
doktor tekhnicheskikh nauk, professor, redaktor; WIFEYAMSKIY, N.A.,
doktor tekhnicheskikh nauk, professor, redaktor; MARTYHOVA, M.P.,
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PUFRYANSKIY N.A., doktor tekhn.nauk, prof.

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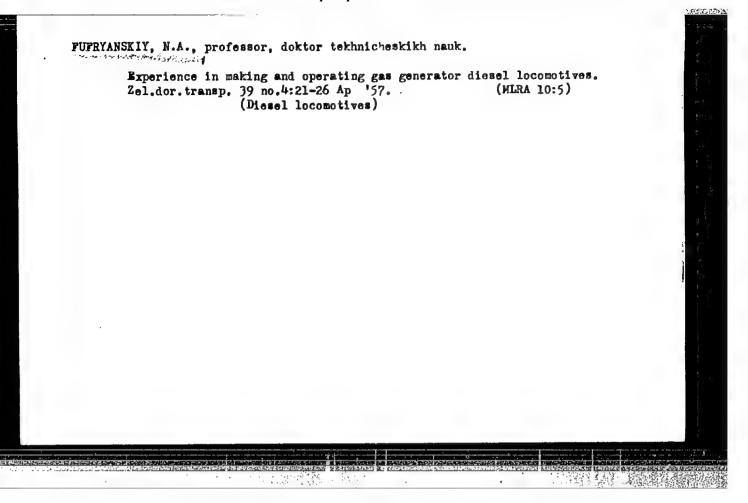
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ABRAMOV, S.A., inshener; VOROB'YEV, N.M., inshener; GLAGOLEV, N.M., doktor tekhnicheskikh nauk, professor; MERLIS, P.M., inshener; MARGULIS, P.S., kandidat tekhnicheskikh nauk; RISKIN, I.V., inshener; FUFRYAUSKIY, N.A., doktor tekhnicheskikh nauk, professor

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